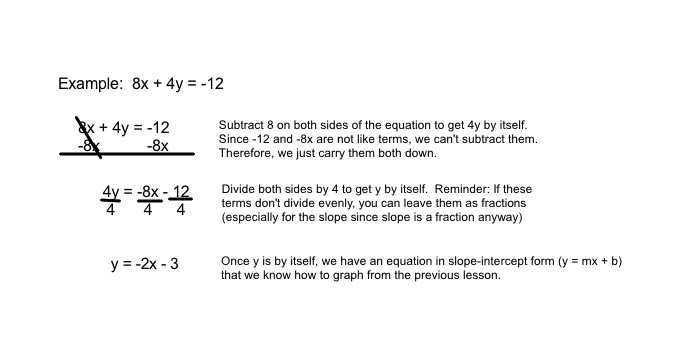
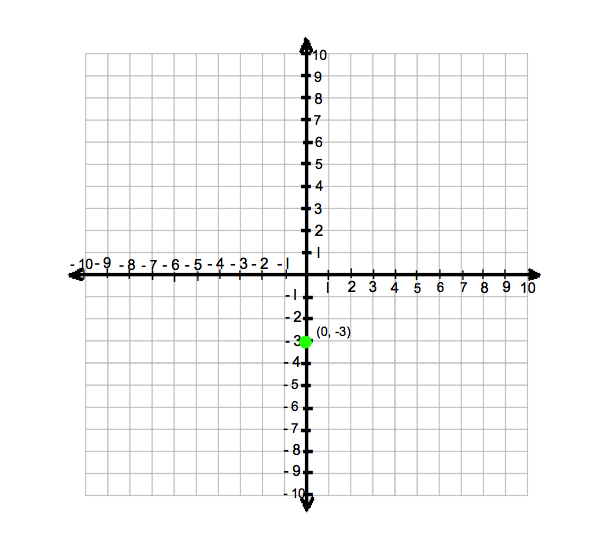
Graphing Equations that are NOT in Slope-Intercept Form

In the last lesson we learned how to graph equations in slope-intercept form by using the y-intercept and the slope. Unfortunately, not all of the equations that we are asked to graph are in slope-intercept form. For example, we may be asked to graph the equation 8x + 4y = -12. In order to graph this equation, we first have to use inverse operations to rewrite the equation in slope-intercept form (in other words, we have to solve this equation for “y”).



Now, on the next page, we will graph the line y = -2x – 3 using the steps we developed in the previous lesson (Graphing Equations in Slope – Intercept Form).

First, we plot the y-intercept (b). According to our equation, the y-intercept is -3, so we plot the point (0, 3) as shown below.



Next, on the next page, we use the slope to find another point on the line.

According to our original equation, the slope of our line is -2. We can write -2 as a fraction by dividing it by 1 and we get . This means that we can either put the negative sign with the numerator  and go down 2 and to the right 1 OR we can put the negative sign with the denominator  and go up 2 and to the left 1 to get to our next point on the line. You can see both ways of using the slope below. (Reminder! We cannot put the negative sign with both the denominator and the numerator because they will cancel each other out and our slope will become positive. Therefore, we CANNOT move down 2 and to the left 1.)

